

[0025] The input unit may receive a user input for changing a position of at least one of the vector between the two different points and the normal vector, and the image processor may generate the image showing the ROI corresponding to the at least one of the vector and the normal vector whose position has been changed.

[0026] The input unit may receive a user input for selecting one of a plurality of circles depicted on the model, and the image processor may generate the image showing the ROI corresponding to the selected circle.

[0027] The input unit may receive a user input for selecting a point in the model, and the image processor may generate the image showing the ROI corresponding to a vector between the selected point and a central point of the model.

[0028] The input unit may receive a user input for selecting a point in the model, and the image processor may generate an image showing the ROI corresponding to a normal vector. The normal vector may include a normal vector that is orthogonal to a vector between the selected point and a central point of the model.

[0029] The input unit may receive a user input for selecting one of a plurality of segments into which the model is partitioned, and the image processor may generate the image showing the ROI corresponding to the selected segment.

[0030] The input unit may receive a user input for designating an angle corresponding to the ROI.

[0031] The input unit may receive a user input for requesting enlargement or reduction of a shape of the ROI in the displayed image, and the image processor may generate an image showing the ROI whose shape has been enlarged or reduced based on the user input.

[0032] The object may include an internal organ, and the model may include a 2D image showing the internal organ.

[0033] The image showing the ROI may include a 2D or 3D image.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034] Embodiments of the invention now will be described more fully hereinafter with reference to the accompanying drawings, in which reference numerals denote structural elements:

[0035] FIGS. 1A and 1B illustrate examples of ultrasound diagnosis systems according to exemplary embodiments;

[0036] FIG. 2 is a diagram of a configuration of an ultrasound diagnosis system according to an exemplary embodiment;

[0037] FIG. 3 is a diagram of a configuration of a wireless probe according to an exemplary embodiment;

[0038] FIGS. 4A and 4B are diagrams illustrating examples in which a probe transmits ultrasound signals to an object, according to an exemplary embodiment;

[0039] FIG. 5 is a diagram of a configuration of a display apparatus for displaying an image showing an object according to an exemplary embodiment;

[0040] FIGS. 6A and 6B are diagrams for explaining a model according to an exemplary embodiment;

[0041] FIG. 7 is a diagram illustrating an example of an initial screen output onto a display apparatus according to an exemplary embodiment;

[0042] FIG. 8 is a diagram for explaining an example of an operation of a display apparatus according to an exemplary embodiment;

[0043] FIG. 9 is a diagram for explaining another example of an operation of a display apparatus according to an exemplary embodiment;

[0044] FIG. 10 is a diagram for explaining another example of an operation of a display apparatus according to an exemplary embodiment;

[0045] FIG. 11 is a diagram for explaining another example of an operation of a display apparatus according to an exemplary embodiment;

[0046] FIGS. 12A and 12B are diagrams for explaining another example of an operation of a display apparatus according to an exemplary embodiment;

[0047] FIG. 13 is a diagram for explaining another example of an operation of a display apparatus according to an exemplary embodiment;

[0048] FIG. 14 is a diagram for explaining another example of an operation of a display apparatus according to an exemplary embodiment;

[0049] FIG. 15 is a diagram for explaining another example of an operation of a display apparatus according to an exemplary embodiment; and

[0050] FIG. 16 is a flowchart of a method of displaying an image showing an object according to an exemplary embodiment.

DETAILED DESCRIPTION

[0051] The terms used in this specification are those general terms currently widely used in the art in consideration of functions regarding the inventive concept, but the terms may vary according to the intention of those of ordinary skill in the art, precedents, or new technology in the art. Also, some terms may be arbitrarily selected by the applicant, and in this case, the meaning of the selected terms will be described in detail in the detailed description of the present specification. Thus, the terms used herein have to be defined based on the meaning of the terms together with the description throughout the specification.

[0052] Throughout the specification, it will also be understood that when a component “includes” an element, unless there is another opposite description thereto, it should be understood that the component does not exclude another element and may further include another element. In addition, terms such as “... unit”, “... module”, or the like refer to units that perform at least one function or operation, and the units may be implemented as hardware or software or as a combination of hardware and software. As used herein, the term “and/or” includes any and all combinations of one or more of the associated listed items. Expressions such as “at least one of,” when preceding a list of elements, modify the entire list of elements and do not modify the individual elements of the list.

[0053] Throughout the specification, an “ultrasound image” refers to an image of an object, which is obtained using ultrasound waves or an image showing a region of interest (ROI) included in the object. An ROI refers to a region of an object that a user desires to observe with more focused attention, and, for example, may be a region including a lesion. Furthermore, an “object” may be a human, an animal, or a part of a human or animal. For example, the object may be an organ (e.g., the liver, the heart, the womb, the brain, a breast, or the abdomen), a blood vessel, or a combination thereof. Also, the object may be a phantom. The phantom means a material having a density, an effective atomic number, and a volume that are approximately the